REMARKS

The Applicant is filing this Response to Office Action in response to the Office Action dated July 30, 2003. At the time of the Office Action, claims 1-19 were pending. In this Response to Office Action, no claims are amended, canceled or added. Accordingly, claims 1-19 as originally filed remain currently pending.

In the Office Action, claims 15 and 19 were rejected under 35 U.S.C. 35 § 102(e) based on U.S. Patent No. 6,285,350 to Ijntema ("the Ijntema reference"). Additionally, claims 1-14 and 16-18 were rejected under 35 U.S.C. § 103(a) as being obvious based on Ijntema in combination with various other references. Each of these rejections is addressed in detail below.

The Rejections Under 35 U.S.C. § 102

As set forth above, claims 15 and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated based on the Ijntema reference. Specifically, the Examiner stated:

> 4. Claims 15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ijntema et al. (6,285,350).
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> As per claim 15, Ijntema et al., hereinafter Ijntema, discloses a hardware-implemented method of color video data correction filtering, comprising the steps of:
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> gamma decompensating input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-33);
>
> compensating for color point data of a plurality of constituent colors of a color monitor by applying a plurality of pie-calculated gamut shifting arrays to the color point data ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34); and

compensating the color point data after application of the plurality of pre-calculated gamut shifting arrays for non-linearities of the color monitor by applying a plurality of non-linearization tables to the color point data to produce output color video data compensated for non-linearities and color points of the color monitor ("Finally, the gamma correction has to be applied again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

5. As per claim 19, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra, and further discloses each of the steps of gamma decompensating, compensating using the plurality of pie-calculated gamut shifting arrays and compensating using the plurality of non-linearization tables is performed at a substantially full video rate (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

Office Action, pages 2-3.

The Applicant respectfully traverses these rejections. Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). In order to maintain a proper rejection under section 102, a single reference must teach each and every element or step of the rejected claim, else the reference falls under section 103. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984).

In the present case, Ijntema cannot anticipate the Applicant's claims because Ijntema does not disclose all of the elements set forth in those claims. Specifically, independent claim 15, which is directed to a hardware-implemented method of color video data correction, recites the acts of "applying *a plurality of pre-calculated gamut shifting arrays* to the color

point data" and "compensating the color point data *after application of the plurality of pre-calculated gamut shifting arrays* for non-linearities of the color monitor by *applying a plurality of non-linearization tables* to the color point data to produce output color video data compensated for non-linearities and color points of the color monitor." (Emphasis added).

Simply put, it is not possible for Ijntema to anticipate claims 15 and 19 at least because Ijntema does not disclose the use of a plurality of pre-calculated gamut shifting arrays or the application of a plurality of non-linearization tables. The disclosure of the Ijntema reference is rather short. Indeed, the entirety of its teachings with respect to color correction is contained in three short paragraphs:

> To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera (i.e., R^{λ}, etc.). Then, a transformation of the RGB signals with a 3x3 matrix can be done. Finally, the gamma correction has to be applied again (i.e., $R^{1/\lambda}$, etc.). The matrix coefficients depend on the panel transmission.
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> A digital implementation in a programmable video signal processor (VSP) has been used to prove the feasibility of the concept. The main task of the VSP is to amplify the digitized RGB signals by a constant factor in such a way that the white point is always correct for various transmissivities of the panel. The characteristics of the panel were measured for 5 different applied voltages. For voltages which are not measured, the characteristics were simply interpolated. A PC computed the correct white point settings as function of the applied voltage, and modified the amplification factors in the VSP. The transmissivity of the panel was adjusted as function of the ambient light. The ambient light was measured with a photo-diode with a sensitivity close to the eye-sensitivity. The relation between the ambient illumination and the transmission of the panel was non-linear. The results were promising.
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> A cheaper solution can be obtained by using analog RGB amplifiers with adjustable gains or by using a customized digital implementation. The gains are changed as function of the applied voltage (transmissivity) of the panel. The characteristics could be stored in a LUT [look-up table].
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> Ijntema, col. 2, lines 23-59.

As is readily apparent from the above passage, Ijntema contains no teaching, suggestion or illustration of how color correction could be performed via the acts of "applying a plurality of pre-calculated gamut shifting arrays to the color point data" and "compensating the color point data after application of the plurality of pre-calculated gamut shifting arrays for non-linearities of the color monitor by applying a plurality of non-linearization tables to the color point data to produce output color video data compensated for non-linearities and color points of the color monitor." These acts are explicitly required by independent claim 15 and dependent claim 19.

Moreover, Ijntema does not describe a plurality of pre-calculated gamut shifting arrays, nor does Ijntema describe how this plurality of arrays would (or could) be applied to color point data. Neither does Ijntema describe a plurality of non-linearization tables. This failure necessarily means that Ijntema is devoid of any teaching, suggestion or illustration regarding how one would (or could) apply the plurality of non-linearization tables set forth in claim 15 to color point data that has already been processed with a plurality of pre-calculated gamut shifting arrays.

For at least these reasons, Ijntema cannot anticipate independent claim 15 and dependent claim 19 under existing law. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claims 15 and 19 under Section 102 based on Ijntema.

The Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-14 and 16-18 under 35 U.S.C. § 103(a) as obvious. Claims 1, 2, 4, 5, 7-9, 12-14 and 18 were rejected under Section 103 based on Ijntema in view of U.S. Patent No. 6,285,350 to Oku ("the Oku reference"). Claims 3, 6, 10 and 11 were

rejected under Section 103 based on Ijntema in combination with Oku and at least one other reference. Finally, claims 16 and 17 were rejected under Section 103 based on Ijntema in combination with at least one other reference. The text of each of these rejections is set forth below.

With respect to the rejection of claims 1, 2, 4, 5, 7-9 and 12-14 based on Ijntema in view of Oku, the Examiner stated:

> Rejection of claims 1, 2, 4, 5, 7-9 and 12-14 under Section 103(a) based on Ijntema in view of Oku:
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> 7. Claims 1-2, 4-5, 7-9, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and further in view of Oku et al. (5,489,996).
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> As per claim 1, Ijntema et al., hereinafter Ijntema discloses a hardware-implemented color video data correction filtering system, comprising:
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> a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-34; "The characteristics could be stored in a LUT", column 2, line 59);
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> a plurality of a set of pre-calculated gamut shifting arrays to compensate for color point data of a plurality of constituent colors of a color monitor with each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34);
>
> and a plurality of non-linearization tables coupled to the plurality of hardware adders to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color points of the color monitor ("Finally, the gamma correction has to be applied again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

Ijntema discloses a color correction system. Ijntema further discloses a matrix for compensating color. It is noted that Ijntema does not explicitly disclose a plurality of shifting array and hardware adders coupled to one of the pre-calculated shifting arrays, however, this is known in the art as taught by Oku et al., hereinafter Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables and adders ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72 and three adders 3, 74 and 75", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

8. As per claim 2, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Ijntema further discloses the plurality of linearization tables comprises three linearization tables (since Ijntema discloses in Figure 1 amplifiers for each of red, green and blue colors, AR, AG and AB, and "The characteristics could be stored in a LUT", column 2, line 59), the set of pre-calculated gamut shifting arrays comprises three pre-calculated gamut shifting arrays ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34), the plurality of non-linearization tables comprises three non-linearization tables, and the plurality of constituent colors comprises three constituent colors (since Ijntema discloses the amplifiers is used for each of red, green and blue colors, it is inherent that they are the three constituent colors and since the linearization table is generated for each of the three colors, it is inherent that non-linearization table is generated for each of the thee colors).

Oku further discloses "the plurality of a set of pre-calculated gamut shifting arrays comprises nine pre-calculated gamut shifting arrays" (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

9. As per claim 4, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Oku further disclose the plurality of a set of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.

10. As per claim 5, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a system of correcting color with a graphics controller (Figure 1C). The controller can use look-up table for processing ("The characteristics could be stored in a LUT', column 2, line 59). It is noted that Ijntema does not explicitly disclose a graphics controller coupled to the plurality of pre-calculated gamut shifting arrays, however, this is known in the art as taught by Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30), wherein compensation for color point data through utilization of the plurality of pre-calculated gamut shifting arrays is performed at the full processing speed of the graphics controller (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

11. As per claim 7, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Ijntema further discloses the non-linearities of the color monitor comprise an input-output characteristic for each constituent color of the color monitor ("The characteristics could be stored in a LUT", column 2, line 59, where the characteristics is the characteristics of the monitor).

12. As per claim 8, Ijntema discloses a computer system, comprising:

a processor (Figure 1C);

video memory coupled to the processor (since LUT could be used in digital implementation (column 2, line 55-60), it is inherent that memory is used to store LUT); and

a color video data correction filtering system coupled to the processor, the system comprising:

a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-34; "The characteristics could be stored in a LUT", column 2, line 59);

a plurality of a set of pre-calculated gamut shifting arrays to compensate for color point data of a plurality of constituent colors of a color monitor with each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34);

a plurality of non-linearization tables coupled to the plurality of hardware adders to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color point of the color monitor ("Finally, the gamma correction has to be applied

again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

Ijntema discloses a color correction system. Ijntema further discloses a matrix for compensating color. It is noted that Ijntema does not explicitly disclose a plurality of shifting array and hardware adders coupled to one of the pre-calculated shifting arrays, however, this is known in the art as taught by Oku et al., hereinafter Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables and adders ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72 and three adders 3, 74 and 75", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

13. As per claim 9, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Ijntema further discloses the plurality of linearization tables comprises three linearization tables (since Ijntema discloses in Figure 1 amplifiers for each of red, green and blue colors, AR, AG and AB, and "The characteristics could be stored in a LUT", column 2, line 59), the set of pre-calculated gamut shifting arrays comprises three pre-calculated gamut shifting arrays ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34), the plurality of non-linearization tables comprises three non-linearization tables, and the plurality of constituent colors comprises three constituent colors (since Ijntema discloses the amplifiers is used for each of red, green and blue colors, it is inherent that they are the three constituent colors and since the linearization table is generated for each of the three colors, it is inherent that non-linearization table is generated for each of the thee colors).

Oku further discloses "the plurality of a set of pre-calculated gamut shifting arrays comprises nine pre-calculated gamut shifting arrays" (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the

linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

14. As per claim 12, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Oku further disclose the plurality of a set of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.

15. As per claim 13, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Ijntema further discloses the non-lineanties of the color monitor comprise an input-output characteristic for each constituent color of the color monitor ("The characteristics could be stored in a LUT", column 2, line 59, where the characteristics is the characteristics of the monitor).

16. As per claim 14, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra.

Ijntema disclose a system of correcting color with a graphics controller (Figure 1C). The controller can use look-up table for processing ("The characteristics could be stored in a LUT", column 2, line 59). It is noted that Ijntema does not explicitly disclose a graphics controller coupled to the plurality of pre-calculated gamut shifting arrays, however, this is known in the art as taught by Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables ("The hardware of the first color

correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30), wherein compensation for color point data through utilization of the plurality of pre-calculated gamut shifting arrays is performed at the full processing speed of the graphics controller (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

Office Action, pages 4-12.

With respect to the rejection of claims 3 and 11, the Examiner stated:

17. Claims 3 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and Oku et al. (5,489,996) as applied to claims 1 and 8 above, respectively, and further in view of Wilt et al. (US 2002/0085015).

18. As per claim 3, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema and Oku disclose a system of color correction for a CRT. It is noted that Ijntema and Oku do not explicitly disclose the CRT (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema and Oku because Ijntema and Oku disclose a system of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color

correcting system using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

19. As per claim 11, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra.

Ijntema and Oku disclose a system of color correction for a CRT. It is noted that Ijntema and Oku do not explicitly disclose the CRT (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema and Oku because Ijntema and Oku disclose a system of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color correcting system using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

Office Action, pages 12-14.

With respect to the rejection of claims 6 and 10, the Examiner stated:

20. Claims 6 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and Oku et al. (5,489,996) as applied to claims 1 and 8 above, respectively, and further in view of Shelton (US 2002/0161 803).

As per claim 6, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a system of color correction which could be applied to TV sets and computer monitors (column 3, line 18-19). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema and Oku because Ijntema and Oku disclose a system of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

21. As per claim 10, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra.

Ijntema and Oku disclose a system of color correction which could be applied to TV sets and computer monitors (Ijntema column 3, line 18-19, where the monitor represents a non-linear color space). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema and Oku because Ijntema and Oku disclose a system of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

Office Action, pages 14-15.

With respect to the rejection of claim 16, the Examiner stated:

22. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Shelton (US 2002/0161803).

As per claim 16, Ijntema demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a method of color correction which could be applied to TV sets and computer monitors (column 3, line 18-19). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a

color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema because Ijntema discloses a method of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

Office Action, pages 15-16.

With respect to the rejection of claim 17, the Examiner stated:

23. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Wilt et al. (US 2002/0085015).

As per claim 17, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra.

Ijntema discloses a method of color correction for a CRT. It is noted that Ijntema does not explicitly disclose the CR1 (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema because Ijntema disclose a method of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color correcting method using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

Office Action, page 16.

With respect to the rejection of claim 18, the Examiner stated:

24. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Oku et al. (5,489,996).

> As per claim 18, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra.
>
> Ijntema discloses a method of correcting color. It is noted that Ijntema does not explicitly disclose the plurality of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables, however, this is known in the art as taught by Oku. Oku disclose a method of correcting color by using a plurality of table instead of matrix (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).
>
> Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a method for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.
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> Office Action, pages 16-17.

The Applicant respectfully traverses these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e.,

something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

In the present case, the rejection of claims 1-14 and 16-18 under Section 103 is defective at least because of the shortcomings of the Ijntema reference that are discussed above with respect to the rejection of claims 15 and 19 under Section 102. As set forth below in detail, independent claims 1 and 8 contain limitations similar to the previously-discussed limitations set forth in independent claim 15. Because of the shortcomings of the Ijntema reference, no combination of Ijntema with any of the other references cited by the Examiner can possibly contain each and every element set forth in the claims that are rejected under Section 103.

In particular, independent claim 1 recites the following: "*a plurality of linearization tables* to gamma decompensate input color video data...", "*a plurality of a set of pre-calculated gamut shifting arrays to compensate for color point data* of a plurality of constituent colors of a color monitor *with each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables...*" and "*a plurality*

of non-linearization tables coupled to the plurality of hardware adders to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color points of the color monitor." (Emphasis added). Independent claim 8 contains analogous limitations.

The shortcomings of Ijntema are not remedied by the Oku reference, which is relied upon by the Examiner in the rejection of claims 1-14 and 18. Oku is relied on by the Examiner for its disclosure of specific structural elements, such as adders, look-up tables and the like. However, even assuming that Oku contains those elements, it is not possible for the combination of Ijntema and Oku to render the Applicant's claims obvious because the recited elements that are missing from Ijntema are not supplied by Oku.

In addition, the combination of Ijntema and Oku is not proper because the Examiner has failed to meet the required burden of articulating a motivation for the modification of the device disclosed in Ijntema with elements taken from Oku. Oku discloses a system for correcting color in a recording device, not a display device, as is disclosed in Ijntema. Moreover, Oku discloses a system that involves three separate color correction units. *See* Oku, col. 2, lines 37-52. There is no teaching, suggestion or illustration in either Ijntema or Oku as to how one of ordinary skill in the art would pick from among the various components shown in Oku and add them to a device such as the device disclosed in Ijntema to create a working device that contains the elements of the Applicant's claims.

As for the motivation of one of ordinary skill in the art to employ the teachings of Oku in combination with the teachings of Ijntema, the Examiner's statement with respect to the rejection of independent claim 1 is exemplary:

> Ijntema discloses a color correction system. Ijntema further discloses a matrix for compensating color. It is noted that Ijntema does not explicitly disclose a plurality of shifting array and hardware adders coupled to one of the pre-calculated shifting arrays, however, this is known in the art as taught by Oku et al., hereinafter Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables and adders ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72 and three adders 3, 74 and 75", column 9, line 25-30).
>
> *Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.*
>
> Office Action, pages 4-5 (Emphasis added).

These statements are nothing more than unsupported assertions about the teachings of Ijntema and Oku, not a convincing line of reasoning *why* one of skill in the art would add combine those teachings. Under the Examiner's standard of obviousness, any two references in a generally related field of endeavor could be combined for the simple reason that those two references are alleged to show all elements of an applicant's claimed invention. This is not the law.

In a similar situation, the Federal Circuit recently overturned the Board, which had upheld an examiner's rejection. In *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002), the examiner rejected the applicant's claims under 35 U.S.C. § 103 without giving the supporting motivation to combine references. The Board subsequently affirmed the examiner's rejection. In overturning the Board's decision, the Federal Circuit stated that:

> When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references, "a question of fact drawing on the Graham factors).
>
> 'The factual inquiry whether to combine references must be through and searching.' *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. [citations omitted].
>
> *Lee*, 61 U.S.P.Q.2d at 1433.

In the present case, the Examiner's assertions about why one of ordinary skill in the art would be motivated to combine the teachings of Ijntema with the teachings of Oku does not meet the evidentiary standard required for obviousness under Section 103. The reasoning cited by the Examiner is not "thorough and searching" and it does not address "the central question [of] whether there is reason to combine [the] references." Indeed, the Examiner's assertions represent nothing more than the use of impermissible hindsight in conjunction with the teachings of the Applicant's own disclosure. There can be no *prima facie* case of obviousness based on the combination of Ijntema and Oku. This is true because elements of the Applicant's independent claims 1 and 8 are clearly missing from Ijntema, and the Examiner has provided no legally supportable basis for adding those elements from Oku.

Claims 16 and 17 stand rejected under Section 103 based on combinations of Ijntema with other references. The rejection of claims 16 and 17, which both depend from claim 15, is improper for at least the reasons set forth above with respect to the rejection of independent claim 15 under Section 102 based on Ijntema. Specifically, Ijntema is missing elements

recited in independent claim 15 and those elements are not supplied by the references relied upon by the Examiner. Indeed, the Examiner does not even assert that the missing elements are provided by the additional references.

For at least these reasons, the Applicant respectfully asserts that the rejection of claims 1-14 and 16-18 under Section 103 is improper. Accordingly, the Applicant respectfully requests withdrawal of all of the rejections under Section 103.

Conclusion

In view of the remarks set forth above, the Applicant respectfully requests withdrawal of all of the Examiner's rejections. Furthermore, the Applicant asserts that an indication of the allowability of claims 1-19 is appropriate. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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